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☒ Generic (ABS, ...)

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## Polyethylene and ethylene copolymers

State: high density homopolymer

### Material Properties

#### Mechanical Properties

		State 1	State 2
Elastic Modulus (MPa)	1070 - 1091	tensile	
Flexural Modulus (MPa)	1001 - 1553	23 °C	
Tensile Strength (MPa)	23 - 32	at break	
	27 - 34	at yield	
Compressive Strength (MPa) at yield or break	19 - 25		
Elongation at break (%)	10 - 1200		
Hardness	66 - 73	Shore D	
Izod Impact (J/cm of notch) 1/8" thick specimen unless noted	0.2 - 2.1		

#### Thermal Properties

		Pressure	State
Coef of Thermal Expansion ( $10^{-6}/^{\circ}\text{C}$ )	59 - 110		
Deflection Temperature ( $^{\circ}\text{C}$ )	80 - 92	0.46 MPa	
Thermal Conductivity (W/m- $^{\circ}\text{C}$ )	0.460 - 0.502		

#### Physical & Electrical Properties

		Condi	State
Specific Gravity	0.952 - 0.965		
Water Absorption (% weight increase)	0 - 0.01	after 24 hr	
Dielectric Strength (V/mil); 1/8" thick specimen unless noted	450 - 500		

#### Processing Properties

		Condition	Type
Melt Flow (gm/10 min)	5 - 18		
Melting Temperature ( $^{\circ}\text{C}$ )	130 - 137	$T_m$ , crystalline	
Processing Temperature ( $^{\circ}\text{C}$ )	177 - 260	injection molding	
	177 - 274	extrusion	
Molding Pressure (MPa)	83 - 104		
Compression Ratio	2		

Linear Mold Shrinkage (cm/cm)

0.015 - 0.04

## Suppliers

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<a href="#"><u>A. Schulman</u></a>	Akron, OH 800-
<a href="#"><u>American Polymers, Inc.</u></a>	Worcester, MA
<a href="#"><u>Bamberger Polymers, Inc.</u></a>	Jericho, NY
<a href="#"><u>Chevron Chemical Co.</u></a>	Houston, TX 800-
<a href="#"><u>Dow Plastics</u></a>	Midland, MI 800-
<a href="#"><u>Eastman Chemical Co.</u></a>	Kingsport, TN 800-
<a href="#"><u>Equistar Chemicals LP</u></a>	Houston, TX 888-
<a href="#"><u>Exxon Chemical Canada</u></a>	Toronto, Ontario, M5W 1K3, Canada
<a href="#"><u>Exxon Chemical Co.</u></a>	Houston, TX 800-
<a href="#"><u>Federal Plastics Corp.</u></a>	Cranford, NJ 800-
<a href="#"><u>Fina Oil &amp; Chemical Co.</u></a>	Dallas, TX 800-
<a href="#"><u>M.A. Industries, Inc.</u></a>	Peachtree City, GA 800-
<a href="#"><u>Mobil Chemical Co.</u></a>	Edison, NJ
<a href="#"><u>Network Polymers, Inc.</u></a>	Akron, OH 888-
<a href="#"><u>NOVA Chemicals, Ltd.</u></a>	Calgary, Alberta T2P 5C6, Canada
<a href="#"><u>Phillips Chemical Co.</u></a>	Bartlesville, OK 800-
<a href="#"><u>R.S.G. Polymers Corp.</u></a>	Stony Brook, NY
<a href="#"><u>Shuman Plastics, Inc.</u></a>	Depew, NY
<a href="#"><u>Solvay Polymers, Inc.</u></a>	Houston, TX 800-
<a href="#"><u>Ticona</u></a>	Summit, NJ 800-
<a href="#"><u>Union Carbide Corp.</u></a>	Danbury, CT 800-

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